



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0297; Directorate Identifier 2012-NM-205-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Bombardier, Inc. Model DHC-8-102, -103, and -106 airplanes. This proposed AD was prompted by a report of cracking in a lower longeron in a nacelle. This proposed AD would require repetitive inspections for cracking of the lower longerons in the nacelles and replacement with new longerons or repair if necessary. Additionally, this proposed AD specifies an optional terminating action. We are proposing this AD to detect and correct such cracking, which could result in degradation of the structural integrity of the nacelle and possible collapse of the main landing gear (MLG).

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Jeffrey Zimmer, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7306; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0297; Directorate Identifier 2012-NM-205-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2012-27, dated November 2, 2012 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

There has been one in-service report where a nacelle lower longeron was found to be cracked during a routine maintenance inspection. The investigation determined that the crack initiated from the right-hand side (RHS) drain hole. Fatigue testing has indicated that both the RHS and left-hand side (LHS) longerons are vulnerable to fatigue cracking. Failure of the nacelle lower longeron would result in a degradation of the structural integrity of the nacelle and could potentially lead to collapse of the main landing gear (MLG).

This [Canadian] AD mandates initial and repeat inspections [for cracking] of the RHS and LHS nacelle lower longerons until the terminating action is accomplished.

The initial inspection may be either a detailed inspection or a bolt-hole eddy current (BHEC) inspection. The repetitive inspection is a BHEC inspection. The corrective action is replacement of the longeron with a new longeron or repair. The optional terminating action is replacement of the nacelle lower longerons, and cold working of the drain holes. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

Bombardier, Inc., has issued Service Bulletin 8-54-39, Revision A, dated August 2, 2012. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because

we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Differences Between This AD and the MCAI or Service Information

Although the MCAI and Bombardier Service Bulletin 8-54-39, Revision A, dated August 2, 2012, specify to contact the manufacturer for instructions to repair certain conditions, this proposed AD would require repairing those conditions using a method approved by either the Manager, New York Aircraft Certification Office (ACO), ANE-170, Transport Airplane Directorate, FAA; or TCCA (or its delegated agent).

Costs of Compliance

Based on the service information, we estimate that this proposed AD would affect about 51 products of U.S. registry. We also estimate that it would take about 21 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$37,485, or \$1,785 per product.

In addition, we estimate that any necessary follow-on actions would take about 100 work-hours and require parts costing \$23,849, for a cost of \$32,349 per product. We have no way of determining the number of products that may need these actions.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:

Bombardier, Inc.: Docket No. FAA-2013-0297; Directorate Identifier 2012-NM-205-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc. Model DHC-8-102, -103 airplanes, and airplanes converted to Model DHC-8-106 in accordance with Bombardier Service Bulletin 8-92-07 or Bombardier Service Bulletin 8-92-08, serial numbers 003 through 287 inclusive, with pre-modification 8/1593 nacelle lower longeron installed, certificated

in any category.

(d) Subject

Air Transport Association (ATA) of America Code 54, Nacelles/pylons.

(e) Reason

This AD was prompted by a report of cracking in a lower longeron in a nacelle. We are issuing this AD to detect and prevent such cracking, which could result in degradation of the structural integrity of the nacelle and possible collapse of the main landing gear (MLG).

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Initial Inspection

At the applicable time specified in paragraph (g)(1), (g)(2), (g)(3) or (g)(4) of this AD: Do a detailed visual inspection or a bolt-hole eddy current (BHEC) test for cracking of each nacelle lower longeron, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-54-39, Revision A, dated August 2, 2012.

(1) For Model DHC-8-102 and -103 airplanes that have accumulated 35,000 total flight cycles or less as of the effective date of this AD: Within 5,000 flight cycles after the effective date of this AD, but not to exceed 36,000 total flight cycles.

(2) For Model DHC-8-102 and -103 airplanes that have accumulated more than 35,000 total flight cycles as of the effective date of this AD: Within 1,000 flight cycles after the effective date of this AD.

(3) For Model DHC-8-106 airplanes with the Pre-Modification 8/1641 configuration, within 500 flight cycles after the effective date of this AD.

(4) For Model DHC-8-106 airplanes with the Post-Modification 8/1641 configuration, within 5,000 flight cycles after the effective date of this AD.

(h) Repetitive BHEC Testing

After accomplishment of the actions required by paragraph (g) of this AD, at the applicable time specified in paragraph (h)(1) or (h)(2) of this AD: Do repetitive BHEC testing for cracking of each nacelle lower longeron, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-54-39, Revision A, dated August 2, 2012, until the terminating action specified in paragraph (j) of this AD is done.

(1) For Model DHC-8-102 and -103 airplanes, at intervals not to exceed 2,500 flight cycles.

(2) For Model DHC-8-106 airplanes, at intervals not to exceed 1,854 flight cycles.

(i) Replacement or Repair of Crack Longeron

If any cracking is found during any inspection required by paragraph (g) or (h) of this AD: Before further flight, replace any cracked nacelle lower longeron with a new longeron, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-54-39, Revision A, dated August 2, 2012; or repair the longeron using a method approved by either the Manager, New York ACO, ANE-170, FAA; or Transport Canada Civil Aviation (TCCA) (or its delegated agent).

(j) Optional Terminating Action

Accomplishment of the actions specified in paragraphs (j)(1) and (j)(2) of this AD constitutes terminating action for the repetitive BHEC testing specified in paragraph (h) of this AD for that longeron only.

(1) Replacement of the nacelle lower longeron, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-54-39, Revision A, dated August 2, 2012.

(2) Cold working of the drain holes, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-54-39, Revision A, dated August 2, 2012.

(k) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-54-39, dated March 14, 2012, which is not incorporated by reference in this AD.

(l) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York ACO, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart

Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7300; fax (516) 794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(m) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2012-27, dated November 2, 2012; and Bombardier Service Bulletin 8-54-39, Revision A, dated August 2, 2012; for related information.

(2) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>. You may review copies of the referenced service information at the FAA, Transport Airplane

Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on March 28, 2013.

Ali Bahrami,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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